



Government response to the Housing,
Communities and Local Government
Select Committee report on
modern methods of construction



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Presented to Parliament
by the Minister of State for Housing
by Command of Her Majesty

September 2019

CP 168



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Any enquiries regarding this publication should be sent to us at

Ministry of Housing, Communities and Local Government
Fry Building, 2 Marsham Street
London SW1P 4DF
Tel: 0303 444 0000

ISBN 978-1-5286-1596-9

CCS0819942756

Printed on paper containing 75% recycled fibre content minimum

Printed in the UK by the APS Group on behalf of the Controller of Her Majesty's Stationery Office

Ministerial foreword

Since becoming Housing Minister, I have been struck by the enormous opportunities to be far more innovative in the way we build new homes. Countries across the world are using new technologies to increase housing supply and deliver good quality new build homes. I want the UK to be at the forefront of pioneering this change.

For decades, the pace of house building has been extremely slow and the number of new homes being built has not kept up to speed with our growing population. This needs to change.

We also need a housebuilding industry that is more focused on the consumer, delivering to those parts of the market that are currently not well-served. That might be specialist age-appropriate housing, or successful build-out of small urban sites with complex access. It might be new community-led housing in rural locations, or housing for key workers whose contributions to society often go unnoticed. These housing needs will be better served by a more diverse developer market.

The way in which the housebuilding market currently operates constrains the supply of new homes due to insufficient competition and innovation. We are heavily reliant on volume housebuilders, who, while an important part of the market, cannot provide the whole answer alone. To rapidly increase the pace of building and reach our housing ambitions, we need to increase the range of producers in the market and also the types of homes they are delivering.

I recognise how Modern Methods of Construction can help the market to go further. This could be in regeneration, or to develop unused brownfield land and hard to access plots – as is already happening in towns and cities all over England.

I have been told by many in the offsite industry of the range of barriers to expansion, and whilst I know my predecessors have taken steps to address these, I plan to look further at how I can support this sector to go further, and faster.

There are challenges, of course, such as finding people with the right skills. I see the opportunities for those already working in construction as well as the potential for a new future workforce. The more we modernise the process of building and make construction an exciting place to work, the more we will keep experienced staff in the industry and attract a new, diverse workforce of talented young people.

Diversifying the market and ensuring it delivers a greater variety of products will not only result in the delivery of additional homes but will also increase market resilience. We need a market that can adapt, to the changing demands of consumers and technology, but also to changing economic conditions. In short, diversification can lead to more homes being delivered faster and to a higher quality, with significant financial benefits. We are committed to ensuring that as the use of MMC expands, quality and safety remains very much at the forefront of what we are trying to achieve.

I am excited to see what the offsite industry has in store over the next few years. I believe it will play a key role in building better homes and stronger communities. While we facilitate this, keeping quality and safety at the heart of home-building will be an essential part of our strategy. Britain can become a world-leader in MMC – and I want to work with the sector to make that ambition a reality.

Introduction

The Government welcomes the Housing, Communities and Local Government Committee's report on Modern Methods of Construction (MMC) following its recent inquiry. We are pleased that the Committee recognises the importance of embracing MMC to build homes quicker and meet our ambition of building 300,000 homes a year by the mid-2020s, meeting housing need while maintaining build quality.

We have repeatedly made clear our commitment to increasing the supply of houses through encouraging a diversified housing market, where firms embrace innovation to become more

productive and deliver a better product to the consumer.

It is well recognised that new technology and innovation have improved productivity, quality and choice across a range of sectors and we are keen to see the same happen in housing. We want housebuilders to embrace MMC and take advantage of new technologies to deliver good quality new-build homes more quickly, with the potential to deliver more energy efficient homes to buyers, improve site efficiencies and reduce waste.

We therefore agree with the Committee that increasing use of MMC may unlock a range of benefits for housing including at lower cost, if done at scale, which is in line with industry's views. It has been encouraging to see the efforts of key stakeholders across the industry embrace innovation and deliver good quality homes in line with Government ambition.

However, we recognise that more needs to be done to continue driving forward a shared vision for the diversified housing market. We all want to see an industry that embraces productive innovation, delivers a better product to the consumer and creates environments in which people want to live and feel safe.

The Housing White Paper published in February 2017, talks about specific measures to stimulate the growth of modern methods of construction, including how we will help to create a pipeline of opportunities to give confidence to the sector and investors. Specifically, we are:

- Backing small and medium sized builders to grow;
- Supporting custom build homes to access land and finance;
- Encouraging more institutional investors into housing, including the Build to Rent sector; and
- Supporting housing associations and local authorities to build more homes

Progress on Government's MMC programme to date

Since the publication of the White Paper, we have continued to provide extensive support for the sector.

Supporting the pipeline

- At Budget 2017, we announced a 'presumption in favour of MMC' by 2019 across all construction programmes in five key Departments where this represents value for money.
- Using the department's commissioning power through the accelerated construction (AC) programme to showcase MMC as a way to drive build out pace and strengthen the supply chain on local authority owned land. Homes England will secure MMC where possible on land released through the Public Sector Land programme.
- MMC is particularly suited to business models which value quality and quicker build so our work to encourage and facilitate the use of MMC to grow through our various programmes including affordable housing, council output, build to rent and custom build, will have a clear impact.

Access to finance

- We have provided financial support through £2.5bn of our £4.5bn Home Building Fund to support builders using modern methods of construction, alongside other new entrants to the market. To date a total of £236m from the Fund has been allocated to schemes that incorporate MMC.

- The Department for Business Energy and Industrial Strategy (BEIS) secured £170m at Budget for construction Research and Development, a proportion of which will be used to support housing.

Encouraging lending and managing risk

- We have established an MMC Working Group to address barriers to assurance, insurance and finance for MMC homes. The group has delivered a standardised definition framework for MMC classification and are also taking forward work to deliver a single assurance platform assessing these new technologies in the coming months.

Planning

- To deliver the specific White Paper commitment to consider how the planning system works for developments using MMC, MHCLG hosted an MMC planning roundtable with local authorities, developers, manufacturers and others last year with the aim of establishing whether specific intervention, including best practice planning guidance was needed. We found that, while there were some issues that could be addressed in the planning system, all stakeholders agreed these were not specific to MMC. We are not taking forward further action at this time.

Expanding the evidence base

- We carried out a survey of housebuilders, through the National House Building Council (NHBC) and the Home Builders Federation (HBF) as well as a manufacturers survey through BuildOffsite in 2018 to better understand industry capacity to deliver MMC homes. We will continue to collect evidence annually to build up a coherent evidence base for MMC through a comparable dataset.

Supporting local authorities in housebuilding

- We have lifted the Housing Revenue Account (HRA) borrowing cap to encourage councils to explore their options for innovation, including MMC, and deliver a new generation of council housing – freeing them up to double delivery to around 10,000 new homes a year by 2021/22. This will also help to diversify the housing market with councils being better able to take on projects and sites that private developers would consider too small.
- To further help councils build, we are providing a longer-term rent deal for 5 years from 2020 that provides local authorities with a stable investment environment to deliver new homes.
- Additionally, local authorities can bid for funding from the £9bn Affordable Homes Programme to deliver affordable homes.

Support for affordable housing

- Homes England is working with 23 strategic partnerships funded by the Affordable Housing Programme, which will deliver an addition 40,000 affordable housing starts by March 2022. Many of these partnerships have said they will include MMC in their builds.
- The GLA have set their own strategic partnerships with Housing Associations in London. These will deliver 54,000 affordable homes for just over £2bn of grant investment.

Improving access to land

- The £630m Small Sites Fund will unlock land for homes on small and stalled housing sites

by 2022/23. The MMC requirements will sit within Homes England grant agreements with local authorities for the Fund.

- The £1.3bn Land Assembly Fund will enable Homes England and the GLA to work alongside private developers to acquire and de-risk sites and make them attractive for rapid private sector development. Encouraging MMC is one of our success measures for the Fund which launched in September last year.
- Of the land programmes the Government has introduced, Accelerated Construction is the most fundamentally geared up to support Modern Methods of Construction. The programme provides investment to unlock up to 32,000 additional homes on surplus public sector land more quickly, focusing on diversifying the market by using MMC and increasing the number of participants in the house-building sector. Homes England deliver the programmes outside of London and are working with local authorities to unlock land for up to 32,000 homes.
- We agreed in December 2018 a memorandum of understanding with the GLA which provides for a £486m budget for the three funds in London. GLA are considering MMC potential for interventions across funds.

Improving skills provision

- In order to help ensure that there is a workforce fit to build the homes needed and scale up innovative training models across the country, this Government has also launched a £24 million Construction Skills Fund. This fund support 24 projects in England to support the development of on-site construction training hubs, of which 19 hubs are on housing developments.
- Furthermore, a recently published Government commissioned report highlights how the increased take up of MMC could play towards helping address the skills shortage.

Responses to Recommendations

Recommendation 1 - *To track how much the Ministry is spending on MMC specifically, it should report annually the total amount allocated to MMC developments across all its different funding streams, including generic schemes such as Help to Buy. It should implement a coordinated strategy across all relevant government departments to increase MMC homebuilding and monitor how many homes are built using MMC, in order to evaluate the impact of this strategy.*

The Government recognises that building more homes at the right pace to help meet our housing target will require building more homes using modern methods of construction (MMC). We are therefore providing significant support to stimulate the growth of MMC, including financial support for this sector to ensure that the UK is at the forefront of delivering homes through our various funding programmes.

Delivery of many of the Government's funding programmes is delegated to Homes England with greater focus on outputs. Whilst Homes England is responsible for monitoring and recording details of bids for the relevant funding, there is currently no requirement for them to regularly report to the Department on funding spent on projects that utilise MMC.

Homes England now has ten public-facing Key Performance Indicators, which were published in its five-year [Strategic Plan](#) 2018/19 – 2022/23. Under one of these KPIs, the agency will report the share of the total housing completions it has directly supported using modern methods of construction (MMC)¹. Alongside this, Homes England will monitor the share of housing starts it

¹ Homes England defines MMC in line with the industry-standard definitions developed by the MHCLG MMC cross-industry working group.

has supported using MMC and the share of total investment it has provided to MMC-focussed projects.

Recommendation 2 - To benefit from the predicted advantages of MMC, such as better-quality finishes from precision manufacturing and developing a high-tech industry that is more appealing for potential employees to be employed in, homebuilders should use more digital technology such as Building Information Modelling (BIM) in their processes and not simply move construction off-site.

The Government agrees with the Committee's recommendation. The use of digital design technologies such as BIM is critical to ensuring both the quality and safety of the design of new homes, but also to making effective use of offsite manufacturing technologies, which rely on digital designs and control systems to enable precision manufacturing.

For the adoption of MMC to thrive, it is important that innovation and R&D are supported within the homebuilding sector. Currently, UKRI is supporting R&D through the £170m Transforming Construction Programme, funded through the Industrial Strategy Challenge Fund (ISCF). This Programme has supported the establishment of the Construction Innovation Hub (CIH), a consortium of the Manufacturing Technology Centre, the Centre for Digital Built Britain and the BRE, to deliver manufacturing support, digital standards (BIM) and expertise focussed on social and economic infrastructure such as schools and hospitals. The CIH will ensure that the construction sector can learn and make use of technology and techniques from other high-tech, lean-manufacturing industries such as Automotive, Aerospace and medicine. By securing future funding, housebuilders can benefit from this same expertise at scale, ensuring the adoption of high-quality MMC.

The consultation, 'Building a Safer Future', sets out the Government's proposals for a radically new building and fire safety system. As part of this new approach to building safety the Government is proposing a golden thread of digital information for all multi-occupied residential buildings of 18 metres or more). The golden thread will support the use of more digital technology within the construction. In the consultation the Government sets out proposals around mandating that the golden thread complies with Building Information Modelling (BIM) standards. Mandating BIM would make best use of ongoing work to promote digitalisation in the construction industry, consistent with other Government and industry initiatives such as the Transforming Construction Programme and the Construction Sector Deal.

Recommendation 3 - The Minister should engage industry to ensure work on data and accountability results in a tangible output that helps industry actors access the relevant data.

The Government created a working group to look at improving access to assurance, insurance and mortgages for MMC homes reporting to the Housing Minister. As part of the working group's programme of work to deliver their objective, they are in discussions with key stakeholders from the group (including the Association of British Insurers) about the possibility of having an electronic, publicly-available dataset on construction types. It is expected that this could give insurers and other stakeholders access to this information and enable them to incorporate MMC developments into their systems. This would help reduce the number of additional requirements sought from people wishing to access insurance on MMC homes therefore increasing the level of accessibility of cover to such homes.

In addition, the Greater London Authority (GLA) has recently launched an open source web tool to help accelerate the housing design process. The tool (PRISM), was developed in partnership with Cast Consultancy (Mark Farmer's organisation) and Bryden Wood (a tech led design practice) as a practical resource which embeds London housing design standards to allow organisations to quickly design MMC housing solutions to deliver housing suitability whilst allowing design flexibility

- even from site identification stage.

It is expected that this platform could unlock the much needed standardisation of products to allow greater interoperability between manufacturers (i.e. by allowing commonality in the design of systems to let one manufacturer take over if another ceases trading). Whilst the tool has been built specifically for London, there is the possibility of it being adapted for use in other parts of the country including scoping the link to digital planning.

Recommendation 4 - *The Government should encourage financial service industries, including insurers and mortgage providers to gather data from other types of buildings such as student accommodation, which incorporate MMC, or from other countries where use of MMC is more prevalent, if applicable.*

The Government recognises that for MMC homes to become an established method of supply to the UK market, accurate records of performance are required to demonstrate confidence for the market to grow.

MHCLG's MMC working group is specifically tasked with addressing barriers to assurance, insurance and finance for MMC homes and increasing uptake of this innovative methods of construction. The group has specifically been working with insurance and warranty providers as well as lenders to get a better understanding of their specific concerns and requirements for MMC and collectively agree on how best to resolve this to improve access to their products for MMC homes.

We have looked to other countries particularly across Europe where MMC is more widely used and accepted, to develop the principles of our MMC initiatives and our wider housing supply programmes.

There have also recently been partnerships between UK housebuilders and foreign investors to build homes in the UK through modern methods of construction providing an opportunity for the UK to benefit from the expertise of the foreign organisations in this area.

Recommendation 5 - *The Government should develop a digital database that records the design, processes and materials used in the construction of buildings. For larger developments, such as blocks of flats, the database should also track modifications and repairs made after completion. This would help to track and aggregate data about homes built using different types of MMC in order to build up a model and inform stakeholders of the likely performance of homes built using the same method in future.*

The Government is currently consulting on proposals for a golden thread of digital information ('Building a Safer Future: Consultation on proposals for reform of the building safety regulatory system') for all multi-occupied residential buildings of 18 metres or more.

The Government believes that a golden thread of accurate and up-to-date information about the design, construction and ongoing maintenance of residential buildings is necessary to support building safety. These proposals will mean that the design, processes and materials used in the construction of buildings and any modifications and repairs made after completion are recorded. The golden thread will use digital tools and systems to enable this information to be stored and used effectively to ensure safer buildings. The golden thread will also make information easily available to the right people at the right time.

Recommendation 6 – *We believe the MMC Scheme (being developed by the working group) should be launched by the end of this year to help increase the take-up of MMC for homebuilding.*

The Government agrees with the Committee's recommendation. The Government set up the MMC working group with lenders, valuers and the industry in line with the commitment in the Housing White Paper to look at assurance, insurance and mortgages for modern methods of construction for the residential sector.

The group has been exploring a range of opportunities to increase confidence in MMC products to ensure homes built using new technology can access insurance and mortgages, and support the uptake of off-site manufacturing technologies across the housing market.

As part of this important agenda, the group recently launched an agreed definition framework and categorisation for all MMC which will help guarantee consistency about MMC definition and categorisation across the sector.

The Government recognises that the most important output of the group is their proposed unified quality assurance scheme for assessing all new technologies to improve their acceptability for mortgages and warranties.

We are convinced that this "Scheme" will make a major contribution towards increasing lender confidence in MMC and increase their access to mortgages on these type of homes and are therefore very keen to ensure it is launched as soon as possible. To ensure this is the case we have continued to provide necessary support to the group to facilitate timely production of this important product and are confident that it would be launched before the end of this year.

Recommendation 7 - The Government must ensure skills programmes, apprenticeship schemes and the new T Level give learners the skills they need for both traditional techniques and MMC and encourages more young people into the sector. Homes England must ensure their partners are delivering necessary skills for a modern workforce and the Construction Industry Training Board must ensure it is delivering the skills necessary for homebuilding. It should also support the reskilling of the current workforce so they can contribute to a modern construction industry.

The Government is improving skills provision for construction and supporting modernisation to increase productivity, but we also expect industry to take responsibility and train the workforce it knows it will need. We are investing in T Levels and providing extensive support for the delivery of industry placements. One of the first T Levels offered will be in construction, with courses in Design, Surveying and Planning being available in 2020. This includes capacity building funding and resources for providers, as well as support for employers through the National Apprenticeship Service.

The Construction Sector Deal, published in 2018, includes an ambition, shared by industry and Government, to raise construction apprenticeship starts to 25,000 by 2020. The Government is working with CITB to ensure a strategic focus on future skills needs and to increase the number of approved apprenticeship standards. There are currently 76 industry-designed standards available in the construction sector, with 22 more in development, giving employers more choice than ever over training to meet their skills needs. There will also be a single industry portal to support construction careers based on Go Construct. An industry action plan, "Building After Brexit"² developed by CITB and leading trade associations, sets out longer term industry-led goals for improving the flow of skilled workers into the sector.

CITB provides a wide range of services in order to deliver the skills the housebuilding industry needs, including offering funding for employers to train their existing workforce and supporting wider industry-led initiatives such as the Home Builders Federation Homebuilding Partnership. CITB also administers the Construction Skills Fund, launched by the Department for Education, which has funded 24 innovative partnerships to set up new skills 'hubs'. 19 of these hubs are on

² <https://www.citb.co.uk/documents/research/citb%20brexit%20action%20plan%20nov%202018%20final.pdf>

live housing construction sites, so trainees will learn practical skills needed to secure a rewarding career in construction. The partnerships will together train over 17,000 people to be job and site-ready by March 2020, which will help meet the needs of employers and will provide a skills boost for the construction industry.

We are currently carrying out an evaluation of the Fund to determine its future funding requirements.

Alongside investment in training, the Sector Deal also commits up to £170 million to the Transforming Construction programme (matched by industry investment of up to £250 million), which is investing in innovative digital and manufacturing technologies to increase productivity and build smarter, greener and more efficient buildings, faster and cheaper than we currently do. The Construction Innovation Hub, a key part of the Sector Deal investment, will help identify the skills needed to support the move towards digital and offsite and help design the qualifications, frameworks and training programmes that will enable firms to train the next generation of apprentices in these skills.

We are continuing to work across Whitehall, with CITB and industry on ensuring the right skills provision to support innovation in construction.

Recommendation 8 - We welcome the steps the Government has taken to support innovations in advanced manufacturing for the construction of homes. The networks of catapults and centres of excellence which bring businesses and academia together to develop advanced manufacturing solutions, should be coordinated with the central Transforming Construction Programme and the Construction Innovation Hub to ensure each has a specific area of focus. The Government should utilise these networks to coordinate the testing and standardisation of MMC processes and components to develop innovative products that comply with the building regulations.

The Transforming Construction Programme has been designed to enable the construction sector, including the housebuilding sector, to draw on the manufacturing technology expertise of centres such as those within the High Value Manufacturing Catapult. The Construction Leadership Council has also undertaken work to identify other centres of excellence that can support firms to develop offsite manufacturing technologies, including the Advanced Manufacturing Research Centre. This will help the industry to develop improved manufacturing processes for homes and other types of built assets, through drawing on the experience and expertise of other sectors.

Within the £170m budget for the Transforming Construction Programme, £72m has been allocated to the Construction Innovation Hub (CIH). This will support the development of new products, and manufacturing processes, as well as the technical standards, testing and validation procedures that will underpin them, and give customers confidence in the quality and safety of the product, including its compliance with building regulations.

In addition to this investment in technology infrastructure, the Transforming Construction Programme is also supporting firms to undertake R&D projects in relation to digital and manufacturing technologies, working in partnership with universities and centres of excellence. The first R&D call, in 2018, awarded a grant of £3.9 towards the £6.5m Advanced Industrialised Methods for the Construction of Homes project, led by Barratt Homes, Tarmac, L & Q and Stewart Milne. These firms will work in partnership with the Manufacturing Technology Centre and the Construction Scotland Innovation Centre (CSIC), both of which have considerable expertise in offsite construction. The project aims industrialise the housing sector by applying design for manufacture and assembly solutions. This will drive improvements to the build quality and subsequent performance of homes. The projects aims to deliver a 20% cost reduction, 30% improvement in productivity, 50% less defects. The methods and techniques commercialised

through this project will be disseminated to the wider industry to drive uptake and adoption. On 28th August 2019, Innovate UK will launch a £36m R&D competition for industry to develop and demonstrate MMC technology, platforms and business models across multiple sectors including housebuilding. Industry applicants to the competition will be encouraged to make use of the CIH and other CLC Centres of Excellence to support their project.

MHCLG's recent call for evidence for Approved Document B which sought views on technical issues and further improvements that could be made within the Approved Document B asked for evidence relating to modern methods of construction. We are developing a plan to update all the Approved Documents, and we will ensure that this takes on board how buildings are currently being constructed.

Recommendation 9 - The MHCLG MMC Joint Industry Working Group should extend its remit to look at advanced skills provision. It should work with Homes England, the AMRC, and other training centres to develop skills programmes that provide learners with the specific skills required for the off-site manufacture of MMC homes.

The MMC working Group is made up of lenders, valuers and other relevant stakeholders involved in the MMC industry. It was specifically commissioned with the objective of increasing confidence in MMC products, and improve the availability and affordability of finance and insurance for MMC homes thereby increasing uptake of MMC across the housing market. The group has made good progress towards delivering their objective and recently developed a standardised definition framework of MMC which will guarantee consistency about MMC definition and categorisation across the sector. They are also working towards delivering a single assurance platform for assessing all new technologies to guarantee their acceptability for mortgages and warranties which should be launched before the end of the year. The Government believes it is important that the group continues to focus on the important issue of increasing confidence in MMC to help increase uptake of this method of construction and make a major move forward in the industry taking responsibility for improved quality and assurance of MMC products.

The Government recognises the importance of further developing advanced skills provision. However as recognised in the report, CITB is responsible for skills provision in the construction industry and are funded through an industry levy. Industry has argued that without collectively-funded training, paid for by a statutory levy on all employers, there is a serious risk that insufficient training will be carried out.

Following the publication of its Offsite Research 'Faster, Smarter, More Efficient: Building Skills for Offsite Construction'³, CITB has agreed £1.2m funding for two projects that will create a range of standardised, innovative and blended learning materials for offsite construction training. Tutors in education and industry will be supported to develop offsite manufacturing and construction knowledge. An outreach programme for secondary schools will also show a new generation the career opportunities involved.

The projects are being led by the Construction Scotland Innovation Centre (CSIC), and the Manufacturing Technology Centre (MTC).

CITB has also made an initial £1m investment in digital leadership; 'Giving construction leaders the skills to drive digital transformation'⁴, since the publication of its Digital Skills Research 'Unlocking Construction's Digital Future: A skills plan for industry' This commission will invest in projects that will pilot approaches to deliver skills and knowledge that leaders need to implement digitalisation.

³ https://www.citb.co.uk/documents/research/offsite_construction/offsite_construction_full_report_20170410.pdf

⁴ <https://www.citb.co.uk/levy-grants-and-funding/grants-funding/citb-commissioned-projects-fund/giving-construction-leaders-skills-to-drive-digital-transformation/>

In addition, both the Manufacturing Technology Centre (MTC) and Advanced Manufacturing Technology Centre (AMTC) have the capacity and expertise to develop skills/training and apprenticeship programmes, and these are going to be a core element of the programme.

Recommendation 10 - *The Government should consider setting requirements for homebuilding developments that benefit from public funds - such as those sold through Help to Buy Schemes - to incorporate the use of MMC techniques, to aggregate demand for MMC products and bolster domestic supply chains.*

There are currently no plans to make the use of MMC a requirement for these funding schemes to ensure we continue to create conditions for the industry to innovate and avoid focusing only on the frontrunners in the sector. However we will continue to encourage beneficiaries of the funds to make use of MMC where appropriate.

Recommendation 11 - *The Joint Industry Working Group on MMC should undertake further work to identify types of MMC that work best and can be used at scale to deliver the good quality homes this country needs with an emphasis on the functional design for the people who will live in them. This will enable the industry to benefit from economies of scale and bolster the supply chains for those types of product.*

The government is seeking to use its purchasing power to create further demand and support industry in the uptake of design and manufacturing techniques, with the adoption of configurable standardised components produced in a quality production system, which it has called a platform approach to design for manufacture and assembly (P-DfMA).

Additionally, at Gateshead Innovation Village, Homes England is working with specialist partners to pitch traditional construction against different modular methods by building a new village of 35 modular houses, using five different house types, alongside six traditional, bricks and mortar homes.

Homes England does not believe that any one type or types of MMC technology will provide the answer to the housing shortage across the country. All types may have a part to play and what is suitable and viable on one site may not be appropriate on another. It is important that all types of MMC are accredited, insurable and mortgageable.

As part of Homes England's work to learn more about the potential of MMC and to test MMC technologies, the agency has committed to a series of pilot site initiatives to provide an opportunity for developers to show a greater level of MMC ambition. The initiative will enable Homes England to source and monitor project data; improve learning outcomes; and increase Homes England's understanding of MMC technologies, including their impact on functional design for the people who will live in these homes. The sites have been selected because of their strong market locations; accessibility for MMC supply chains; geographical range; and the local market appetite. Homes England is currently developing a research brief and commissioning an external consultancy to develop findings from the initiative. It is anticipated that the project will run for six years and that a baseline report will be ready by the end of the 2019/20 financial year.

Recommendation 12 - *The Government should use initiatives such as the AIMCH project to harness the skills and knowledge of industry actors to learn what their priorities are and develop best practice in construction in order to build the homes the country needs. The Building Better, Building Beautiful Commission should investigate designs for MMC homes that can overcome road capacity size restrictions, while delivering high quality homes.*

AIMCH is one of many successful R&D projects funded by the £170m Transforming Construction programme. On 28th August 2019, Innovate UK will launch a £36m R&D competition for industry to develop and demonstrate MMC technology, platforms and business models across multiple

sectors including housebuilding. This final round of funding will enable successful businesses to develop the knowledge and expertise required to design and deliver MMC buildings and homes across the UK.

The Government notes the recommendation that the Building Better, Building Beautiful Commission should investigate designs for MMC homes that can overcome road capacity size restrictions, while delivering high quality homes. The independent Commission published its interim report on 9 July, and we look forward to receiving their final report in December which will include the Commission's recommendations to Government.

Recommendation 13 - *The Government should record how many components for MMC homes are imported and set targets to reduce their use in proportion to the UK manufactured supply chain. It should enable manufacturers in the supply chain for MMC homes to access low-cost loans through the Home Building Fund so they can invest in factories, increase capacity and help homebuilders to reduce their reliance on imported components. The Government should use its record of imported components to assess the effectiveness of these measures at boosting domestic supply.*

The Government notes the Committee's recommendation. We however believe that recording imported components for MMC homes is unlikely to have any substantive benefits.

However, the Home Building Fund is already providing significant financial support to the industry. The Fund includes a £2 billion long term infrastructure funding which MMC manufacturers can already access for investments into factories.

Under the EU Construction Products Regulation (2011), compliance with European harmonised standards is compulsory for EU/EEA members, including the UK. There is currently no intention to move away from harmonisation once the UK leaves the EU. This should ensure that construction products continue to have access to the UK and EU market with minimum disruption to businesses and consumers.

Recommendation 14 - *Local authorities should increase rapidly the pace at which they build new social homes. They should further engage with housing associations which have already adopted MMC, in order to better understand best practice and explore the potential for more MMC use in the supply of social housing. Local authorities should also factor in whole-life running costs of social homes when tendering for building contracts.*

12,440 council homes were built between 2010-11 and 2017-18 compared to just 2,920 homes built over the previous 13 years (1997-98 to 2009-10). The Government is enabling local authorities to build a new generation of council homes, and on 29th October 2018 we abolished the Housing Revenue Account (HRA) borrowing cap, freeing up local authorities to double delivery to around 10,000 new homes a year by 2021/22. In addition, local authorities can bid for funding from the £9bn Affordable Homes Programme to deliver affordable homes, and we are providing local authorities with a stable investment environment through a new rent deal for 5 years from 2020 enabling rents to be charged by up to CPI +1%. Together, these measures adds up to a comprehensive range of tools to increase council housebuilding.

The Government supports innovation in the delivery of new social homes. We are pleased that a number of local authorities are reporting that they are building MMC homes. Over the years, there have been a number of successful partnerships between local authorities and housing associations, and the Government welcomes further opportunities for closer engagement between local authorities and housing associations in sharing experiences and delivering innovative approaches to social housebuilding.

The Committee also proposed that local authorities should factor in whole-life running costs

of social homes when tendering for building contracts. Arrangements for tendering for building contracts, along with spending decisions associated with council housebuilding, are devolved to local authorities. Following the abolition of the Housing Revenue Account borrowing cap, local authorities have considerable financial flexibility to build new council homes in line with the Prudential Code.

Recommendation 15 - Homes England must speed up progress on its Accelerated Construction Programme. Current developments must keep to their deadlines and Homes England should prevent delays on future sites. We reiterate the recommendation made by our predecessor Committee that Homes England should provide the Committee with regular updates on progress across the full range of initiatives to bring additional land into use.

Homes England continues to work closely with local authorities who enter the Accelerated Construction programme to ensure they keep to the deadlines and commitments they have agreed to. Homes England will report regularly to Government through its agreed Key Performance Indicators.

In terms of Homes England land, in Autumn 2018 Homes England embarked on a complete review of its land disposal processes to:

- speed up the timescales by which land is sold,
- introduce measures across our land disposal processes aimed at improving the quality of design submissions provided by developers; and
- embed measures for securing better and more ambitious MMC propositions from developers.

This work was completed in December 2018 - and rolled out on a test basis between January and March 2019. Following further refinements resulting from the trial, the new land disposal procedures went fully operational in April 2019.

With these improvements in place, the volume of land being sold through the AC Programme (that will achieve MMC outcomes) will double from 33 sites (2018/19) to 73 in the current year (2019/20).

On the specific point about regular reporting MHCLG's position remains that there is not a need for additional reporting to the Committee given that Homes England provides regular reporting to the Ministry across the suite of land programmes and information is published regularly both by Homes England and the Ministry on progress to bring land back into use.

Recommendation 16 - The Government should ensure the Small Sites Fund and Land Assembly Fund do not become additional stalled initiatives. It should provide the Committee with an update in September 2019 to show what progress has been made in the year since the launch of the Funds.

The Ministry will provide an update before the end of the year on the Small Sites Fund and Land Assembly Fund.

Recommendation 17 - The Government should urgently set out a clear plan for the review of the whole suite of Approved Documents, including a timeline for implementation. This review should consider how the Approved Documents relate to MMC buildings and where relevant, provide additional guidance on how MMC homebuilders might reach the required standards.

In the Building A Safer Future consultation the Government reiterated its commitment to undertake

a programme of work to review the technical content in the Approved Documents. This includes updating the technical content to ensure that they reflect the latest innovations in science and construction technology. To deliver on that commitment, we have already launched a call for evidence on Approved Document B and recently published clarified ADB. We also intend to consult later this year on improving the energy efficiency standards of new and existing domestic and non-domestic buildings (Approved Document L) in line with the Clean Growth Strategy. This review also covers ventilation requirements in Approved Document F and consideration of overheating standards. To improve accessibility requirements in Approved Document M, we are currently consulting on how we can increase provision of Changing Places toilet facilities in specific new, large buildings commonly used by the public, including a potential change to building regulations.

The Government has also already committed to set out a work plan by the end of this year on how to deliver the recommendations from Dame Judith's review on how to ensure that Approved Documents are structured in a way to provide a more streamlined, holistic view of guidance that is clearer and user friendly, whilst retaining the right level of technical detail.

The Building Regulations contain a set of functional performance requirements to ensure that buildings are safe, structurally stable, energy efficient and accessible and do not prescribe the technologies to deliver this outcome. The Approved Documents give general guidance on the performance expected of materials and building work to comply with the Building Regulations and practical examples and solutions on how to achieve compliance. As part of the review of the Approved Documents, we will take on board how buildings are currently being constructed.

Recommendation 18 - To meet its target to eradicate the UK's net contribution to climate change by 2050, the Government should embrace every opportunity to reduce carbon emissions. It should be ambitious in setting carbon reduction targets for the built environment both during construction and in use. The building regulations should set more stringent energy performance targets for homes to take into account achievable levels of energy efficiency. MMC should be used to deliver more efficient homes now to avoid costly retrofitting of homes later to comply with more rigorous energy efficiency targets.

The Building Regulations have already contributed significantly to improving the energy efficiency of new buildings and to the reduction of UK carbon emissions and will continue to do so in the future. The Building Regulations energy efficiency standard for new homes has been increased by over 30% since 2010 reducing energy bills by £200 per annum on average and saving carbon. Government is committed to reviewing the energy efficiency standards of the Building Regulations as stated in the Clean Growth Strategy. This includes consulting on improving energy efficiency requirements in new and existing buildings where the evidence suggests it is cost effective, affordable, practical and safe to do so.

In the Chancellor's Spring Statement, the Government committed to introduce a Future Homes Standard by 2025 for new build homes to be future-proofed, with low carbon heating and world-leading levels of energy efficiency, to create healthy homes that are fit for the future, have low energy bills, and are better for the environment. The Future Homes Standard will be implemented through an uplift to the Building Regulations, subject to consultation. We will expand on the technical detail of these proposals during the 2019 consultation on energy efficiency standards in the Building Regulations.

As part of our 2019 review and consultation on energy efficiency standards in the Building Regulations we are investigating how MMC could support the Grand Challenge Mission on Clean Growth to halve the energy use of new buildings by 2030.

The Building Regulations do not regulate for the carbon emissions of the construction process

or the embodied carbon of the building materials. To regulate for embodied carbon a simple, standardised method of calculation would be required, supported by a robust evidence base. Currently, there is no widely agreed method for calculating this.

The Building Regulations set minimum energy performance standards for new homes and non-domestic buildings. They are deliberately couched in performance terms and do not prescribe the technologies to be used, such as MMC, allowing builders the flexibility to innovate and select the most practical and cost-effective solutions in particular circumstances.

The Transforming Construction programme has created the Active Building Centre; a centre of excellence for net energy-positive homes and infrastructure. By integrating energy generation and storage technology, the Active Building Centre aims to make future homes part of an integrated energy-generation system. Reducing emissions for generations to come.

In addition, we are currently considering commissioning research into the durability of MMC to get a better understanding of their performance and safety following recommendations from Building Regulations Advisory Committee's recommendation on this issue.

Recommendation 19 - The Government should use the Home Building Fund to provide further finance to MMC homebuilders urgently. It is not clear whether the other funds the Government has launched will help MMC builders to access the upfront capital they need. The Government should ensure these funds can be utilised to build more MMC homes.

Homes England supports developers to unlock and accelerate housing delivery via loans from the £4.5bn Home Building Fund. These loans can support innovative developers using modern methods of construction. £2.5bn of the funding is directed at SME housebuilders such as Pocket Living, who deliver affordable homes via MMC. The remaining £2bn is used to fund infrastructure provision on large sites, supporting projects such as L&G's MMC delivery at Crowthorne in Berkshire. 27 enquiries have been made to the Home Building Fund for direct MMC/Factory funding, demonstrating the investment demand to establish the capacity in this sector. All in all, Homes England has provided more than £206m in loans to developers utilising MMC.

In addition, Homes England has a £1.7bn package to support 23 Strategic Partnerships with housing associations, which will deliver around 40,000 affordable housing starts by 2022. A large proportion of these homes will be delivered using MMC techniques. Homes England is considering further proposals for Strategic Partnerships with housing associations, as well as looking at greater flexibilities over how and when grant funding can be drawn down through our Shared Ownership and Affordable Homes Programme, working towards the delivery of at least 130,000 affordable housing starts by March 2022.

Recommendation 20 - The plethora of different funds is confusing, so the Government should provide signposting for homebuilders, to enable them to easily identify which funds they can access.

The Government recognises the importance of improving access to finance for small and medium sized housebuilders to enable them grow and build the homes the country needs. MHCLG and BEIS therefore supported UK Finance, working in collaboration with Federation of Master builders at the end of 2018 to provide guidance to small and medium sized housebuilders about available sources of funding, including Government funding to assist with their projects.

The guidance "Guide to Development Finance for Small and Medium Size Housebuilders" is available at <https://www.ukfinance.org.uk/system/files/SME-Housebuilders-Guide-FINAL-V3-ONLINE.pdf>

Homes England is working to change fundamentally how it engages with all its partners, including

housebuilders, in order to identify the support and resources they need more effectively. Central to this is the creation of a new Markets, Partners, Places division which will act as a front door to the agency, providing partners with tailored access to the agency's resources (including both expertise and products). An example of this new way of working is the 23 Strategic Partnerships we have launched with housing associations, which will deliver around 40,000 affordable housing starts by 2022. The partnerships provide partners with a new relationship with the agency through which they can access wider resources beyond grant funding, including land and non-grant based investment products.

Recommendation 21 - We welcome the ENABLE Scheme and Housing Growth Partnership to help SME homebuilders to access finance but urge the Government to ensure these schemes allow homebuilders to access the up-front capital required to invest in innovation and MMC. These initiatives must be closely monitored to ensure they are helping homebuilders to increase output, including MMC output. If current schemes are insufficient to increase MMC output, new schemes aimed at MMC developments should be considered.

The ENABLE Build scheme aims to increase the availability of debt finance for SME housebuilders by providing up to £1bn of guarantees via the British Business Bank, working with Homes England. The scheme makes available portfolio guarantees to lenders to SME housebuilders of, say, £100m, who then extend individual loans in the region of £1m-5m which are covered by the guarantee. SME housebuilders approach the lenders in the usual way – there is no interface between borrowers and Government.

We have not designed the product so that it is restricted to particular tenures or construction methods, so it would be open to homebuilders wishing to invest in innovation and MMC to apply for a loan with one of the lenders who have been provided with a guarantee. Further information can be found in the Request for Proposals: <https://www.british-business-bank.co.uk/wp-content/uploads/2019/04/ENABLE-Build-RfP-v1.0.pdf>.

To ensure robust monitoring of scheme outputs we have agreed a comprehensive suite of management information will be provided to MHCLG by Homes England and the British Business Bank. This will include the total amount of loans approved and the number of homes expected to be built using each loan, allowing us effectively to track outputs from the scheme.

Through the ENABLE Scheme, Homes England encourages MMC where practicable. However, monitoring and reporting on MMC outputs is not currently possible due to Homes England's arms-length position from the guarantee given. The agency is in the process of developing an in-house Build to Rent SME Guarantee scheme, with the intention that this will support and encourage innovation and the use of MMC, and monitor the latter's use accordingly.

Similarly, MMC use is not a contractual requirement of the Housing Growth Partnership. However, the partnership is open to and will support its use where appropriate. Homes England is working closely with the partnership to obtain the monitoring information required to quantify the number of MMC schemes and/or homes provided through the fund, and it is expected that this will be received by the end of Q2 2019.

